

2023



Using
Radiation
Therapy
to Treat NMSC

TWO CASE STUDIES
Office-Based Radiation
Therapy for the
Dermatology Clinic

PATIENT STORIES
Patient Experience with
Radiation Therapy for NMSC

THE DERMATOLOGY INSIDER

EXPAND YOUR TREATMENT
ARMAMENTARIUM



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RADiant™, Radiant, and RADIANT are used interchangeably to represent the same product.

About Radiant Radiant is a small, easy-to-position radiation therapy system that enables dermatologists to deliver non-invasive treatment for non-melanoma skin cancer in the office. It is perfectly suited for sensitive areas, including hard-to-reach areas on the head and neck. Radiant provides both superficial radiation therapy and electronic brachytherapy based on the needs of the patient.

Low-dose, non-invasive radiation therapy complements my surgical practice for NMSC

Michael Crowe, MD, Owensboro Dermatology Associates (Owensboro, Kentucky)

Obviously, no one on Earth has ever been thrilled with a cancer diagnosis, but for those who have non-melanoma skin cancer (NMSC), the good news for them is that it is usually treatable. As we all know, the standard of care for treating NMSC on the face and neck is Mohs surgery, which offers a very high cure rate.

There are, however, several contraindications for surgery. My practice is located in western Kentucky, where there is a large population of farmers and outdoor workers who are chronically exposed to the sun. Many of my patients are in the older age range (65-75+) and may be on anti-coagulants or immunosuppressants, and have comorbidities – some of which may make surgery undesirable or contraindicated. Particularly when patients are facing lesions on the nose, helix, face and scalp, as well, it's important to be able to offer a non-invasive treatment alternative that can also reduce possibility of scarring.

Over the last three decades we've treated more than 50,000 skin cancers at my practice with various treatment modalities, but it wasn't

until 2012 that we began offering SRT with our first Xstrahl machine, an X100. I chose to begin offering low-dose radiation therapy because I believed it was in the best interest of my patients. Many were so relieved when I told them they were candidates for a non-invasive treatment alternative to surgery.



Dr. Michael Crowe has offered SRT in his office since 2012

In 2017, we added the second Xstrahl unit, a Radiant system, which is capable of delivering both SRT and eBt. I chose to expand my practice to include eBt because it was better suited to certain types of lesions, and oftentimes eBt treatment can be completed in fewer visits than with SRT. Having the dual

modality system also means that I can provide my patients various options based on their insurance coverage, which is also a very practical consideration for my patient population. Currently, we treat approximately 20 patients each week with Radiant using SRT and eBt.

From a clinical outcomes and patient satisfaction perspective, my ability to offer office-based SRT and eBt is not only practical but also affordable and many patients find these treatment alternatives to be very desirable options. This is not only because the procedures are painless, non-scarring and come with minor, manageable side effects, but also because the cure rates are reported to be 95 percent and higher.

A recent typical case involved a 76-year-old man with a 1.1 centimeter basal cell cancer on his left upper nose in the medial canthus area. This individual, who also had heart disease and was on antiplatelet therapy, had received SRT before to another area and he strongly preferred it over surgery. We treated the skin surface using a margin of 0.5 centimeters and delivered two fractions per week
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Although Mohs surgery continues to be the standard of care, patient selection criteria demands alternative treatment options and reimbursement for eBt and SRT is often higher based on the number of fractions prescribed.

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over five weeks for a total dose of 40 Gy. The only side effects were some redness and irritation at the treatment site, which – with the application of 2.5% hydrocortisone – resolved after a month. Resolution of redness in a very short time is common and occurs in 95 percent of our patients.



We've been using eBt at our practice for three years, and we prefer it over SRT for allowing treatment on small areas and to deliver fewer fractions than SRT. SRT is employed for larger lesions on areas that don't require smaller margins, such as those on the legs. Xstrahl also recently introduced an eight centimeter SRT applicator that would be ideal for treating a large lesion on the scalp, for example.

Office-based radiation therapy has been a very simple technique to perform by virtue of Xstrahl's low energy systems, especially with our Radiant unit. The software is

excellent, the system is very easy to use and quite intuitive, and comes with a wide variety of applicators to match a range of tumor sizes. We have also used these systems extensively to treat the shin, pre-tibia area, and ankles.

One of the things that I appreciate about working with Xstrahl is that we receive great application support and training, which made the learning curve short for me and my support team, especially those who were new to this type of therapy. Physics support before go-live is also essential, and Xstrahl provides that, as well as required annual machine calibration. Xstrahl also helped our practice recruit a licensed radiation therapist to operate one of our systems, which helps balance the workload.

The positive experience patients have with these techniques will continue to drive demand, and I've seen this first-hand in my clinic. In the minds of many skin cancer patients, the benefits of a painless treatment, with minimal side effects and no scarring, far outweigh the possible inconvenience of multiple clinic visits. In the end, patients are often extremely happy with the results, and there is no question that I am better serving my patients by offering these effective, non-invasive alternatives. ■

DID YOU KNOW?



NCCN Guidelines exist for NMSC and clearly define the role of radiation therapy in the management of skin cancer.



National Comprehensive Cancer Network®

The American Academy of Dermatology supports consideration of superficial radiation therapy as a second line option for the treatment of BCC and SCC, for use when surgical intervention is contraindicated.



FAQ

Here are some frequently asked questions about the use of non-surgical, low-dose radiation therapy in office-based dermatology practices and more about the Radiant Aura treatment device.

Are there any guidelines for the use of radiation therapy in dermatology?

Yes, NCCN Guidelines exist for the treatment of NMSC and clearly define the role of radiation therapy in the management of skin cancer. In addition, the American Academy of Dermatology supports consideration of SRT as a second line option for the treatment of BCC and SCC, for use when surgical intervention is contraindicated.

Why would a dermatologist consider using radiation therapy to treat NMSC?

Office-based radiation therapy provides additional treatment options when surgery is not an option, or the patient prefers a non-invasive option for treating NMSC. In addition, radiation therapy can also be used to treat post-operative keloid scarring. Typical treatment sessions last 10-15 min, and the patient's prescription and treatment plan can be adjusted to the patient's cosmetic outcome requirements, daily schedule, and ability to attend the clinic.

What's the difference between SRT and eBt?

Both modalities deliver low-dose treatments to penetrate the skin. SRT utilizes a source to skin distance ≥ 5 cm, which is effective for larger diameter treatments. The treatment course for SRT is typically 15-20 treatments.

eBt utilizes a source to skin distance ≤ 5 cm, allowing the use of minimal margins on small lesions, a higher daily dose, and a shorter treatment course. The treatment course for eBt is typically 8-10 treatments.

Do most office-based radiation therapy devices offer both radiation treatment modalities?

No. Radiant is currently the only office-based radiation therapy device for dermatology that offers both SRT and eBt functionality. Due to these capabilities, Radiant Aura gives dermatologists maximum flexibility to provide the type of radiation therapy treatment that is best suited to each patient's unique needs.

How will the radiation therapy treatments be reimbursed?

In the United States, there is established reimbursement for SRT and eBt but it varies according to geographic location and type of payer. For this reason, it is important to check all local requirements.

What are the success rates associated with radiation therapy?

Treatment with radiation therapy has a high rate of success. Treatment for skin cancers using SRT is comparable to surgical excision with 90-98 percent effectiveness. Treatment of keloids, combined with a suitable surgical excision, has a success rate of up to 94 percent.

Interested in Partnering with a Radiation Oncology Service Provider?

To expand patient access, Xstrahl has teamed up with several radiation oncology service providers to further support office-based radiation therapy delivery in dermatology. Service providers coordinate state requirements, provide equipment, manage implementation and train staff, and provide ongoing support and guidance. If you're interested in expanding your practice with an easy, turnkey solution, contact Xstrahl at radiant-therapy.com to learn more.

TWO CASE HISTORIES

Office-Based Radiation Therapy for the Dermatology Clinic

Dr. Sean E. Mazloom, MD, FAAD, ReJUVA Dermatology, Vein & Skin Cancer Center, Venice, FL

CASE 1

Basal Cell Carcinoma

Case Highlights

Location: Superior parietal scalp

Lesion Size: 3 cm x 2.8 cm BCC

Treatment Margin: 0.5 cm

Field Size (Applicator): 4.0 cm

Depth: 0.5 mm

Total Treatments: 10

Treatments Per Week: 2

Dose per Treatment: 400 cGy

Total Dose: 4000 cGy

Energy: 70kV

Patient Details

A 71-year-old female presented with a basal cell carcinoma (BCC) located on the left superior parietal scalp. The patient has a history of actinic keratosis and basal cell carcinoma. She had a complete consultation regarding all applicable modalities for the treatment of her skin cancer.

Based on the tumor type, size, and location, and relevant medical history, eBt was determined to be the optimal treatment method based on a variety of factors.

Treatment Outcomes

As expected, the radiation caused radiation dermatitis with bright red eczematous edematous plaques on the scalp. During the acute phase, no skin infection was present. Overall, the patient's treatment and healing process was unremarkable. Eight weeks following the last treatment the skin was healed with no evidence of crusting, scarring, or erythema.

5 Months Post Treatment

Evidence of the BCC on the scalp was non-existent. New, healed skin had replaced very prominent skin cancers. The patient was delighted with the result and relieved to have avoided surgery.



Fig 1: BCC lesion on the scalp prior to treatment



Fig 2: Treatment area eight weeks after treatment

Radiant Aura Brings Radiation Therapy into Any Dermatology Office



SMART

Smarter, **dual modality** treatment system with SRT and eBT capability meets patient needs and optimizes reimbursement.



SIMPLE

Small and compact - built to deliver **fast, convenient, and comfortable** treatments every time. Halo light enables rapid set-up.



SUCCESSFUL

Provides meticulous control over treatments, delivering **surgical-quality results** with highly effective cure rates, and minimal side effects.

CASE 2

Squamous Cell Carcinoma

Case Highlights

Location: Right Distal Pretibial Region

Lesion Size: 2 cm x 1.9 cm SCC

Treatment Margin: 0.5 cm

Field Size (Applicator): 3.0 cm

Total Treatments: 17

Treatments Per Week: 3

Energy: 80 kV

Dose per Treatment: 300 cGy

Total Dose: 5100 cGy



Fig 1: SCC lesion on right distal pretibial region prior to treatment



Fig 2: Treatment area eight weeks after treatment

Patient Details

An 87-year-old female presented with an SCC located on the right distal pretibial region. The patient has a history of actinic keratosis, basal cell carcinoma and squamous cell carcinoma. She had a complete consultation regarding all applicable modalities for the treatment of her skin cancer.

SRT was determined to be the optimal treatment method based on a variety of factors including the tumor type, size, and location, and relevant medical history.

Treatment Outcomes

As expected, the radiation caused radiation dermatitis with bright red eczematous edematous plaques on the right leg, which was treated with hydrocortisone. During the acute phase, no skin infection was present. Overall, the patient's treatment and healing process was unremarkable. Eight weeks following the last treatment the skin was healed with no evidence of crusting, scarring, or erythema.

Five Months Post Treatment

Evidence of the SCC on the right distal pretibial region was non-existent. New, healed skin had replaced two very prominent skin cancers. The patient was pleased with the result and relieved to have avoided surgery. ■



Easy, Non-Surgical Superficial Radiation Therapy was **Ideal** for My Skin Cancer

Mike had a quarter-sized spot on his leg that was not healing. A patient of Dr. John Binhlam's dermatology practice for more than 20 years, he decided to seek treatment to heal his leg. A diagnosis of squamous cell carcinoma led him to non-surgical SRT treatment from Dr. Binhlam using the Radiant system at Advanced Skin & Laser Center in Brentwood, TN.

With my Irish complexion, I'm prone to having little things pop up on my skin, and I see my dermatologist annually to take a look at everything. This past year, there was a spot on my left calf area that just wasn't healing for months. Dr. Binhlam performed a biopsy and it came back as a squamous cell carcinoma.

We discussed all that was involved with the different treatment options. One option was surgery, but the location on my leg made me pause. I wasn't terribly excited about having an incision there. In particular, I was concerned about the healing process in that location. Another option was SRT treatment in his office. We discussed the process and a treatment plan, and I reviewed the literature about it. I felt very positive about the method and the convenience of it. Dr. Binhlam explained that there would be multiple short, 15-minute

treatment sessions over several weeks, which some people do not want to deal with. However, since I live very close to the practice, that didn't concern me.

Treatment and Recovery

All of my treatments were conducted in a regular exam room, using the Radiant system from Xstrahl. Medical staff secured my leg and did skin mapping to target the area. The first thing that surprised me was the length of the actual treatment. The medical team left the room and came back in about a minute later. It was like nothing happened! It was just painless. My lesion was treated in a total of 17 short treatment sessions, which ended in October.

It is healing nicely. There was a slight discoloration of the area for a few months after my treatment ended but it has disappeared now. The treated area on the outside of the calf had also been irritated by



Mike before treatment



Mike after treatment

the pant leg rubbing on it, but this didn't start until late in the treatment series. It wasn't painful and I was able to use an over-the-counter ointment to soothe the itching.

The treatment schedule had little impact to my days since I live so close by the office. It was such an easy process of simply seeing your dermatologist. They usually did treatments twice a week which could simply be rescheduled if necessary. It was very convenient to arrange and took just moments on treatment dates. The full treatment cycle is now completed and I don't anticipate needing any more. I will have a follow up in 3-6 months to check on the healing.

High Praise

I'm very satisfied with SRT as a non-surgical option that works for me. And I've already recommended this to others – including my son! My son lives in another state but developed a skin issue that was also diagnosed as a squamous cell carcinoma on his face. His dermatologist suggested that he could remove it surgically, but I knew that could leave a facial scar, so I strongly encouraged him to explore the radiation process. His dermatologist referred my son to another doctor that offered SRT. I saw my son recently and it is almost impossible to see any kind of disfigurement. There is a little shiny area but you only see it in a certain profile or a certain light. ■

Radiant Aura is Designed for Office-Based Dermatology

- Enables treatment for NMSC when surgery is not indicated; offering a similar cure rate
- Patient's prescription and fractionation can be adjusted to suit the patient's cosmetic outcome requirements, daily schedule, and ability to attend clinic
- Two reimbursement options to fit your patient's health plan – 1) eBt and 2) SRT
- Typical treatment session lasts 10-15 min (2-3x per week) with treatment times of 2 mins or less for a 4Gy fraction



Provides an Alternative for Patients:

Many patients would prefer a non-surgical option for their cancer treatment. Radiant Aura can be an alternative to those patients that are on an anti-coagulant therapy, or may have other comorbidities in which surgery could compromise function or cosmesis.

Radiant Aura treatment is ideal for patients:



With a history of adverse events associated with surgery such as wound healing



With lesions located in areas that may be difficult for surgery or closure, such as the scalp

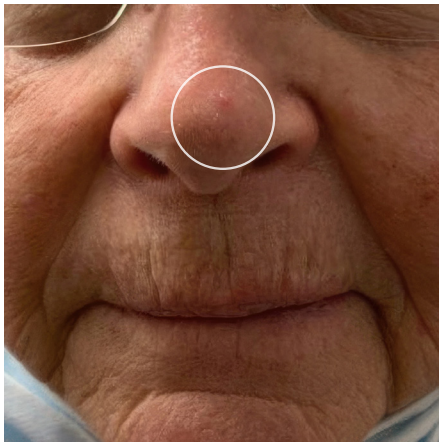


When functional deficit may be a concern, such as around the mouth or back of the hands

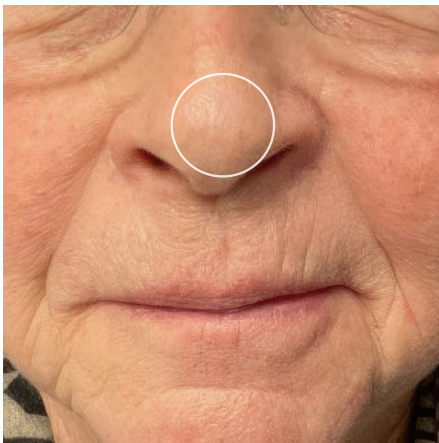


With contraindications for surgery such as anti-coagulants

Superficial Radiation Therapy was a Simple Choice for My Skin Cancer



Marcia before treatment



Marcia after treatment

Marcia is 74 years old and a great-grandmother from Bell Buckle, Tennessee. Last year, she noticed bleeding from a tiny spot on the tip of her nose. At her next appointment, she had her dermatologist, Dr. John Binhlam, take a closer look. He did a biopsy on the spot, and she was diagnosed with an invasive squamous cell carcinoma (SCC) of the nasal tip.

After a discussion of Mohs micrographic surgery versus nonsurgical SRT, Marcia chose to have the latter treatment done using the Radiant system at his office, Advanced Skin & Laser Center in Brentwood, Tennessee.

I'm retired and live in a small town. I enjoy a laid back country lifestyle, with hours spent mowing the lawn or spending my days with my young great-grandchildren. I see the dermatologist regularly to care for my eczema and monitor my medication. A year ago, I noticed a spot that had started bleeding occasionally. Being a frequent patient, I mentioned it at my next appointment. He was able to test it right away and a biopsy came back as an invasive squamous cell carcinoma (SCC) of the nasal tip.

The spot was so small – really just the size of the head of a sewing push pin, and maybe a freckle color. I might not have noticed it at all if it hadn't started bleeding. I have been Dr. Binhlam's patient for more than three years and he knows me well. He reviewed all the treatment options with me and based on a number of factors unique to me, he recommended SRT treatment. He had such confidence in SRT as a reasonable alternative to surgery for my SCC that I agreed right away.



Read more patient stories here

95%
**HIGHLY EFFECTIVE
CURE RATES**

With little impact on patients' day-to-day lives or concerns about other comorbidities, treatment for skin cancers using SRT is comparable to Mohs surgery, with over 95 percent effectiveness. Unlike surgery, patients enjoy a pain-free alternative to skin cancer treatment without discomfort, scarring, or downtime.

I began SRT using the Radiant system from Xstrahl. The treatment cycle was 17 treatments, but the sessions were only a matter of seconds! I sat in a chair for the treatment. The medical staff used eye, nose, neck and body shields to protect me, and brought the machine over and made sure it was in just the right spot. Then the medical team stepped out of the room for the therapy, and came right back in. It takes no time, with no heat or discomfort during the procedure. I had no side effects at all during the entire SRT series – no redness or irritation. And, I was assured that once the treatment course was over, I would not need follow-up treatments outside of my regular office visits.

It was a very easy process and I drove country roads an hour to each of the appointments. I'm retired now and take extra precautions in the sun with sunscreen and a hat, but we didn't think about that when we were younger. I have a friend who had a similar thing just off the tip of her nose and she had it removed surgically. That worked for her, but I'm happy that I went with SRT for me. ■



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SIMPLE.
SUCCESSFUL.**

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armamentarium for NMSC

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